Claims

1. Method for screening for inhibitors of phospholipid hydroperoxide glutathione peroxidase (PHGPx) derived from human tissue or human cells comprising the steps of
   a) determining the enzymatic activity of said PHGPx in the absence and presence, respectively, of at least one potential inhibitor,
   b) selecting at least one inhibitor which specifically blocks PHGPx activity and subjecting said inhibitor(s) to a screening for pharmaceutical acceptance and
   c) selecting a pharmaceutically acceptable inhibitor which, by specifically blocking PHGPx, reversibly suppresses male fertility.

2. Method of claim 1, wherein the tissue or cells are from life stock or any related mammalian species.

3. Method of claim 1, wherein PHGPx is produced by genetic engineering.

4. Method of claim 1, 2 or 3, wherein the potential inhibitors have been tailored by computer designing and/or produced by a chemical process of production.

5. A pharmaceutically acceptable inhibitor of PHGPx from human tissue obtainable by the method according to claim 1, 2, 3 or 4 and useful for male fertility control.

6. Pharmaceutical composition comprising at least one inhibitor of PHGPx from human tissue according to claim 5

and at least one pharmaceutically acceptable carrier and/or diluent or no such carrier/diluent.

7. Use of an inhibitor of PHGPx according to claim 5 or of a pharmaceutical composition comprising said inhibitor of PHGPx according to claim 6 in a method for reversibly blocking male fertility.

Summary of the invention

The invention relates to a method to search for male antifertility drugs based on activity determination of phospholipid hydroperoxide glutathione peroxidase (PHGPx) derived from human tissue or human cells or from related mammalian species.

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Leopold Flohé et al.

New Claims

1. Method for screening for pharmaceutically acceptable PHGPx inhibitors (inhibitors of phospholipid hydroperoxide glutathione peroxidase), which, by specifically blocking PHGPx, reversibly suppress male fertility, comprising the steps of

(a) determining the enzymatic activity of said PHGPx, which is derived from human tissue or human cells, in the absence and presence, respectively, of at least one potential inhibitor,

(b) selecting at least one inhibitor which specifically blocks PHGPx activity and subjecting said inhibitor(s) to a screening for pharmaceutical acceptance, and

(c) selecting a pharmaceutically acceptable inhibitor.

Claims

1. Method for screening for inhibitors of phospholipid hydroperoxide glutathione peroxidase (PHGPx) derived from human tissue or human cells comprising the steps of
   a) determining the enzymatic activity of said PHGPx in the absence and presence, respectively, of at least one potential inhibitor,
   b) selecting at least one inhibitor which specifically blocks PHGPx activity and subjecting said inhibitor(s) to a screening for pharmaceutical acceptance and
   c) selecting a pharmaceutically acceptable inhibitor which, by specifically blocking PHGPx, reversibly suppresses male fertility.

2. Method of claim 1, wherein the tissue or cells are from life stock or any related mammalian species.

3. Method of claim 1, wherein PHGPx is produced by genetic engineering.

4. Method of claim 1, 2 or 3, wherein the potential inhibitors have been tailored by computer designing and/or produced by a chemical process of production.

5. A pharmaceutically acceptable inhibitor of PHGPx from human tissue obtainable by the method according to claim 1, 2, 3 or 4 and useful for male fertility control.

6. Pharmaceutical composition comprising at least one inhibitor of PHGPx from human tissue according to claim 5

and at least one pharmaceutically acceptable carrier and/or diluent or no such carrier/diluent.

7. Use of an inhibitor of PHGPx according to claim 5 or of a pharmaceutical composition comprising said inhibitor of PHGPx according to claim 6 in a method for reversibly blocking male fertility.